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SOURCE Documentary as indicated. (Information specifically requested.)

**RECENTLY PUBLISHED RESEARCH OF THE
SVERDLOVSK HYGIENIC RESEARCH INSTITUTE**

"Determination of the Clearness of Water," S. K. Chirkov, N. V. Milyukhin, Sverdlovsk Sci Res Hygienic Inst

"Zavodskaya Lab" Vol 12, 1946, pp 174-6

Photometric determination of clearness of water was carried out with a Se photocell having sensitivity of 400 micromicroamps per lumen. Procedure described. Current strength of photocell measured by needle galvanometer. Bulb power and photocell were pre-calibrated with distilled water. Determinations carried out with light filters. Photo-clearness of water expressed in relative units with respect to distilled water; all photodeterminations preceded by visual determinations. Both results plotted on same diagram. Equations for calculating clearness of water given.

"Determination of Sucrose and Lactose in Children's Milk Mixtures," B. O. Lyubin, L. I. Zeldina, Sverdlovsk Hygienic Inst

"Gigiyena i Sanitoriya" Vol 10, No 10/11, 1945,
pp 29-35

Polarimeter is employed in the determinations.

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"Application of Cerium Sulfate for Determination of Oxidizable Material in Water," L. I. Bezeli,
Sverdlovsk Res Hygienic Inst

"Zhur Priklad Khimii", Vol 18, 1945, pp 361-6

It was shown that cerium sulfate is readily applicable in the sanitary practice of testing natural and drain waters for the degree of oxidizability. Reagent is superior to the KMnO_4 procedure because of the stability of the oxidizing agent itself and the stability of the titers.

"New Index of Water Contamination: The Bromine Number," S. K. Chirkov, Sverdlovsk Hygienic Res Inst

"Gigiyens i Sanitariya", No 12, 1944, pp 7-12

Amount of oxidizable organic matter determined by titration at room temperature with NaOBr , about 0.002 %, in H_2SO_4 . The Br number b is expressed in mg equivalent per liter water. In addition to organic matter, inorganic sulfides, nitrites, and Fe^{++} compounds consume Br, but they are negligible in comparison with the organic matter. The b corresponds to the amount of the most active organic matter present at each stage, while the KMnO_4 oxidizability k is an index of the organic matter reacting only with energetic oxidants. The ratio $a = (100 - b/k)$ plotted against s , the degree of O saturation, is linear. An s of 100% corresponds to an a of 1.2%, representing the upper permissible limit of organic matter. An excess is expressed by $v = (665 b/k) - 1$, termed the activity coefficient of organic contamination. v proved to be a very sensitive index of contamination of rivers with fresh fecal matter (v values up to 3.0). It is a convenient measure of the progress of aerobic self-purification. Values of $v > 1$ are an indication that the water is objectional.

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